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Remarks

This a full and timely response to the outstanding Advisory Action mailed on 09/09/2004. In response, please acknowledge Applicants' request for continued examination (RCE), enter the amendments, and consider the following remarks. The final Office Action of 05/17/2004 rejected claims 1 and 17 under 35 U.S.C. 112, first paragraph. Further, claims 1-5, 11, 17-19, 21, and 27-29 were rejected as being unpatentable under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,644,625 of E.L. Solot (hereafter referred to as Solot). Finally, claims 6-10, 12-16, 22-26, and 31 were rejected under 35 U.S.C. §103 as unpatentable over Solot in view of U.S. Patent No. 6,088,428 of D. Trandal, et. al (hereafter referred to as Trandal). No claims are being amended or cancelled.

The Advisory Action improperly set the period to reply to expire 3 months from the mailing date of the Final Rejection, 05/17/2004, rather than the mailing date of the Advisory Action, 09/09/2004. Applicants' response to the Advisory Action was filed on 07/16/2004 via facsimile which was less than 2 months from the mailing date of the Final Rejection. M.P.E.P § 706.07(f) (F) states:

> Where the final Office action does not set a variable reply period as set forth in paragraph (A) above AND applicant does file a complete first reply to the final Office action within 2 months, and if an advisory action is necessary and cannot be mailed within 3 months of the final Office action, the examiner should vacate the original SSP and reset the reply period to expire on the mailing date of the advisory action by using form paragraph **7.67.02**. In no case can the statutory period for reply expire later than 6 months from the date of the final Office action. Note that form paragraph **7.67.02** can be used with the advisory action (preferable) or after the advisory action is mailed to correct the error of not setting a variable reply period.

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Applicants request that this mistake be corrected so that applicants are only required to pay a one month extension for this response which will be filed on 10/10/2004, with the date of 10/09/2004 occurring on a Saturday. Applicants' attorney appreciated the opportunity to discuss this matter with Supervisory Patent Examiner Fan Tsang during a telephone call.

Rejection of Claims 1 and 17 under 35 U.S.C. 112, first paragraph

This rejection is respectfully traversed.

The Advisory Action states:

Applicant's arguments does not overcome the 112 rejection as the HMM in applicant's system performs the analysis on phonemes but not the presence of tones, the tone detector within applicant's system perform the tone detection before the speech analysis (see page 24 lines 5-15 of applicant's specification) and furthermore in FIG. 11 block 1100 in which applicant refers to as using speech recognition to detect tones. Examiner does agree that applicant's automatic speech recognition unit/engine analyzes the presence of tones but that is not recited in claim 1.

Amended claim 1 now recites in part "analyzing using the automatic speech recognition analysis calculations the received audio information for a second type of classification wherein the second type of classification is for identification [a presence] of tones in the audio information...." With respect to the discussion of block 1100 in the Advisory Action, applicant's specification states "Decision block 1100 make the initial decision whether the information is to be processed as a speech or tone utilizing the information that was inserted or not inserted into the feature vector in blocks 806 and 805, respectively, of FIG. 8." (Page 26, lines 5-8.) Whether the information is inserted depends on the results of the "fast detection of voice" analysis performed by block 802. In response to the output of block 802, decision block 804 transmits a control signal to either block 805 or 806 depending if information is not to be inserted or is to be inserted. (Page 23, line 18- page 5.) Fast detection of voice analysis block 802 is clearly not a tone detector. Hence, the text

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cited by the Advisory Action in the specification is not using a tone detector.

Further, another one of three embodiments in the specification does not include the function of an operation such as fast detection of voice analysis or operations like those of decision block 1100. (FIGS. 12 and 13 and accompanying text in the specification.) This other embodiment also provides support for amended claim 1 under 35 U.S.C. 112, first paragraph.

With respect to the statement in the Advisory Action that "Applicant's arguments does not overcome the 112 rejection as the HMM in applicant's system performs the analysis on phonemes but not the presence of tones", Blocks 1111-1116 of FIG. 11 and accompanying text in the specification clearly detail that HMM analysis is used for identification of tones. (Page 26, line 25 through page 27, line 3.) Also, the text cited by the Advisory Action states "Block 807 as can be seen in FIG. 11 actually performs one of two HMM analysis depending on whether the frames were designated as speech or tone by decision block 894." (Page 24, lines 9-12.) In addition, the other embodiment as illustrated in FIGS. 12 and 13 and accompanying text in the specification also details that HMM analysis is used for identification of tones. (Page 27, lines 13-20.)

In summary, applicants submit that the specification complies with 35 U.S.C. §112, first paragraph so as to provide support for claims 1 and 17.

Rejection of Claims 1-5 under 35 U.S.C. 102(b)

Amended claim 1 recites:

receiving audio information from the destination endpoint;
analyzing using automatic speech recognition analysis calculations the received audio information for a first type of classification;
analyzing using the automatic speech recognition analysis calculations the received audio information for a second type of

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classification wherein the second type of classification is for
identification of tones in the audio information; and
determining a call classification for the destination endpoint
in response to the analysis of the first type of classification and the
analysis of the second type of classification.

The Advisory Action states that "Solot uses an automatic speech
recognition system which includes speech recognition (system 5 with units
11 and 13 of FIG. 1) to analysis the received audio information and for the
presence of tones (col. 5 lines 31-62). Solt's speech system 'recognizes'
tones from other audio signals (speech) and therefore shows it can
separately recognize the difference between speech (voice) and tones via
the speech recognizer." The cited text from Solot states:

> The inventive apparatus recognizes the standard intercept
> tone by well known techniques which isolate the intercept tone
> from other audio signals and to determine the presence or
> absence of the intercept tone. The telephone company when a
> telephone number is changed, disconnected or other such
> happening that will not allow the call to be completed will intercept
> the incoming call and present a recorded voice message back to
> the caller stating why the call cannot be completed--this is the
> intercept message and is preceded by a tone or group of tones.
> When the tone or tones is received the present system will record
> the voice intercept message.
> The present system analyzes the voice message via the
> voice recognition board (FIG. 1, item 13). The software and the
> hardware that analyzes the voice is capable of providing a
> confidence level associated with the decoding of the voice
> message. A threshold 109 is provided such that when the
> confidence level meets or exceed the threshold the message
> contents are processed for a change in telephone number 111.
> The confidence level is built into the software supplied with the
> Voice Recognition board. This software determines what the
> utterance is and supplies a number form zero to 99 to indicate
> confidence in the utterance being properly determined. The
> system software will decide what level is suitable for acceptance
> depending on the errors encountered in a real world environment.
> If a new telephone number is provided the call may be placed to
> the new number 115 or a prompt to the caller informing 117 the
> caller of the new number. If the caller does not want to call the
> new number the system reverts back to the start 100. Otherwise,

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if the caller wishes, the new number is dialed and the state reverts
to state 102.

The cited text clearly does not state that the tones are identified using
automatic speech recognition; rather, the cited text states "The inventive
apparatus recognizes the standard intercept tone by well known
techniques which isolate the intercept tone from other audio signals and to
determine the presence or absence of the intercept tone." There is no
indication that these well known techniques include using automatic
speech recognition which could not be known except from applicants'
patent application. Clearly, Solot discloses detecting that an intercept
tone has been received using conventional tone detection techniques,
recording the voice message, and analyzing the recorded voice message
to determine the new telephone number but not to identify a tone, blocks
105-109 of FIG. 2A and accompanying text in Solot. These are not the
steps recited in claim 1. Further, Solot does not disclose or suggest that
the system identifies the intercept tone by determining the new telephone
number since the voice message is not recorded and subsequent voice
analysis performed unless the intercept tone had been first determined.

In summary, Solot does not anticipate amended claim 1 under
35 U.S.C. 102(b). Claims 2, 3, and 5, as presently in the application, and
amended claim 4 are directly or indirectly dependent from amended claim
1 and are patentable for at least the same reasons as amended claim 1.

Rejection of Claim 11 under 35 U.S.C. 102(b)

Amended claim 11 is patentable under 35 U.S.C. 102(b) for the
same reasons as amended claim 1.

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Rejection of Claims 17-21 under 35 U.S.C. 102(b)

Amended claim 17 and claims 18, 19 and 21, as presently in the application, are patentable under 35 U.S.C. 102(b) for the same reasons as amended claim 1 and claims 2, 3, and 5, as presently in the application, and amended claim 4.

Rejection of Claims 27-30 under 35 U.S.C. 102(b)

Amended claim 27 is patentable under 35 U.S.C. 102(b) for reasons similar to those set forth for amended claim 1. Claims 28, 29, and 31 are directly or indirectly dependent on claim 27 and are patentable for at least the same reasons.

Rejection of Claims 6-10 under 35 U.S.C. 103(a)

Claims 6-10 are directly or indirectly dependent on amended claim 1 and are patentable for at least the same reason as amended claim 1. Amended claim 1 is also patentable under 35 U.S.C. 103(a) over Solot in view of Trandal. The Examiner states that "Trandal discloses using a Hidden Markov Model to determine the presence of words and/or tone in audio information (col. 8 lines 16-25 and col. 23 lines 17-28)". Trandal does disclose using a Hidden Markov Model to determine the presence of words but not to determine the presence of tones. Cited text at col. 8, lines 16-25 states:

> Over a frame duration, the DSP processes the signals represented by the received frames and transmit frames, for each channel of activity, as directed by DSP software in the program store. The DSP can perform several different types of processing including speech encoding and decoding, companding, tone detection and generation, speech recognition, text-to-speech conversion, etc. All require DSP processing or computation. Thus, the frame duration determines the maximum total number of computations possible per frame of transmit and receive data.

The cited text clearly does not state that the tone detection is being performed using any type of speech recognition but rather that tone detection is just one of a number of operations that the DSP can perform.

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The cited text at col. 23, lines 17-28 states:

If no DTMF digits are detected then state 548 is entered to process a voice utterance by the subscriber. As described in detail below, the DSP generates a hidden Markov model template for the utterance and compares the input template to the subscriber's stored template which was generated in the enrollment mode described above. In one preferred embodiment the DSP is also provided with means, in a subroutine of a stored program, to provide a subscriber with access to a mailbox extension. If extension service is enabled then control is passed on branch 552 to state 720 (not shown in detail) to process access to a mailbox extension.

Clearly, the cited text has no disclosure or suggestion of using any type of speech recognition technique to identify tones. Amended claim 1 is patentable under 35 U.S.C. 103(a) over Solot in view of Trandal.

Rejection of Claims 12-16 under 35 U.S.C. 103(a)

Claims 12-16 are patentable under 35 U.S.C. 103(a) over Solot in view of Trandal for similar reasons as those set forth for claims 6-10.

Rejection of Claims 22-26 under 35 U.S.C. 103(a)

Claims 22-26 are patentable under 35 U.S.C. 103(a) over Solot in view of Trandal for similar reasons as those set forth for claims 6-10.

Rejection of Claim 31 under 35 U.S.C. 103(a)

Amended claim 27 is patentable under 35 U.S.C. 103(a) over Solot in view of Trandal for similar reasons as those set forth for amended claim 1. Claim 31 is directly dependent on amended claim 27 and is patentable for least the same reasons.
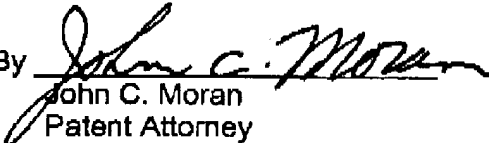
Summary

In view of the foregoing, applicants respectfully request consideration of amended claims 1, 4, 11, 17, and 27, and reconsideration of claims 2, 3, 5-10, 12-16, 18, 19, 22-26, 28, 29, and 31, as presently in the application, and allowance of these claims.

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Although the foregoing is believed to be dispositive of the issues in the application, if the Examiner believes that a telephone interview would advance the prosecution, the Examiner is invited to call applicants' attorney at the telephone number listed below.

Respectfully,

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By _____
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